

## REMARKS

This Amendment responds to the Office Action dated July 27, 2005 in which the Examiner rejected claims 1-17 under 35 U.S.C. §101, rejected claim 1-8 and 10-17 under 35 U.S.C. §102 and rejected claim 9 under 35 U.S.C. §103.

As indicated above, claims 1 and 14 have been amended to be directed to statutory subject matter. The amendment does not narrow the literal scope of the claims. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to the claims under 35 U.S.C § 101.

Claim 1 claims a multi-dimensional table data management unit implemented on a computer comprising table data management means for managing a plurality of n-dimensional tables (n is a natural number equal to or larger than 3) as a processable data group of n-dimensional data block. The table data management means performs numerical logical operation and position conversion of n-dimensional discrete data of the tables in n-dimensions for data management. N-dimensional discrete data is configured, not by overlaying two-dimensional tables, but by using an n-dimensional discrete data aggregate. Output means outputs a result of the management.

Through the structure of the claimed invention having a data table management means which manages a plurality of at least three dimensional tables and performs numerical logical operation and position conversion of n-dimensional discrete data where the n-dimensional discrete data is configured, not by overlaying two-dimensional tables, but using an n-dimensional discrete data aggregate, as claimed in claim 1, the claimed invention provides a multi-dimensional table data management unit in which a cross sectional surface of the three dimensional table in

an arbitrary direction can be displayed as new two dimensional data and if the three dimensional table is rotated in any arbitrary direction a new three dimensional data table can be created. The prior art does not show, teach or suggest the invention as claimed in claim 1.

Claim 14 claims a recording medium for use with a computer system having an input device and an output device. The recording medium recording therein a spreadsheet program that defines a plurality of n-dimensional tables (n is a natural number equal to or larger than 3) as a processable data group of an n-dimensional data block, and defines numerical logical operation and position conversion of n-dimensional discrete data of the tables in n-dimensions for data management. N-dimensional discrete data is configured, not by overlaying two-dimensional tables, but by using an n-dimensional discrete data aggregate.

Through the structure of the claimed invention having a spread sheet program that defines a plurality of at least three-dimensional tables and defines numerical logical operation and position conversion of n-dimensional discrete data where the n-dimensional discrete data is configured, not by overlaying two-dimensional tables, but by using an n-dimensional discrete data aggregate, as claimed in claim 14, the claimed invention provides a recording medium in which a cross sectional surface of the three dimensional table in an arbitrary direction can be displayed as new two dimensional data and if the three dimensional table is rotated in any arbitrary direction a new three dimensional data table can be created. The prior art does not show, teach or suggest the invention as claimed in claim 14.

Claims 1-8 and 10-17 were rejected under 35 U.S.C. §102 as being anticipated by *Liaw et al* (U.S. Patent No. 5,572,644).

*Liaw et al* appears to disclose processing and presentation of information by program applications, particularly electronic spreadsheets. (col. 1, lines 29-31) Notebook 250, shown in FIG. 2C, provides an interface for entering and displaying information of interest. The notebook 250 includes a plurality of spreadsheet pages, such as page 251 (Page n). (col. 8, lines 32-35) Each spreadsheet page of a notebook includes a 2-D spread. (col. 8, lines 48-49) For selecting a plurality of information cells, both 2-D blocks (e.g., block 254 of FIG. 2C) and 3-D blocks of cells may be defined. A 2-D block is a rectangular group of one or more cells and is identified by block coordinates, such as the cell addresses of its upper-left and bottom-right corners. Similarly, a 3-D block represents a solid block (e.g., cube) of cells. A 2-D block is specified by selecting, with mouse 105 or keyboard 104, opposing corners. In FIG. 2C, for example, the block 254 is defined by corner cells C5 and F14. (col. 9, line 64 through col. 10, line 6) Selection of 3-D cell blocks, i.e., cell ranges spanning more than one page, occurs in a similar fashion. To extend the block 254 (of FIG. 2C) into a 3-D block, the user specifies an additional or third dimension by selecting an appropriate page identifier. (col. 10, lines 19-23) Pages may be selected or grouped together, thereby providing a means for changing multiple pages simultaneously. In much the same manner as cells from a spread are grouped into 2-D blocks, a range of pages are grouped by specifying beginning and ending members. As shown in FIG. 4F, a range from Page A to Page K may be achieved by selecting tabs A (261) and K (267) from identifiers 260, for example, while depressing a key (e.g., status key). A grouping indicator 268 is displayed for indicating members of a group; groupings may also be annotated with user-specified labels. Once grouped, a page of the group may have its operations (e.g., selection,

data entry, and the like) percolates to the other members of the group, as desired.  
(col. 10, lines 29-41)

Thus, *Liaw et al.* merely discloses a notebook having a two-dimensional spread (col. 8, lines 48-49) which extends a two-dimensional block into a three-dimensional block by adding an additional dimension by selecting an appropriate page identifier (col. 10, lines 19-23). Thus nothing in *Liaw et al.* shows, teaches or suggests n-dimensional discrete data is configured, not by overlaying two-dimensional tables, but by using an n-dimensional discrete data aggregate as claimed in claims 1 and 14. Rather, *Liaw et al.* teaches away from the claimed invention and has a two-dimensional block extended into a three-dimensional block by adding an additional dimension by selecting an appropriate page identifier.

Additionally, *Liaw et al.* merely discusses selecting or grouping together pages. Nothing in *Liaw et al.* shows, teaches, or suggests a data conversion function by an n-dimensional logic calculation (i.e., in which a cross sectional surface of the three dimensional table in an arbitrary direction can be displayed as new two dimensional data and if the three dimensional table is rotated in any arbitrary direction a new three dimensional data table can be created). In other words, Figure 7G of *Liaw et al.* does not show, teach, or suggest conversion of the data itself into three dimensional data.

Since nothing in *Liaw et al.* shows, teaches or suggests a) n-dimensional discrete data as configured, not by overlaying two-dimensional tables, but by using an n-dimensional discrete data aggregate and b) positional conversion of n-dimensional discrete data by a numerical logical operation as claimed in claims 1

and 14, Applicant respectfully requests the Examiner withdraws the rejection to claims 1 and 14 under 35 U.S.C. §103.

Claims 2-8, 10-13 and 15-17 depend from claims 1 and 14 and recite additional features. Applicant respectfully submits that claims 2-8, 10-13 and 15-17 would not have been anticipated by *Liaw et al* within the meaning of 35 U.S.C. §102 at least for the reasons as set forth above. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 2-8, 10-13 and 15-17 under 35 U.S.C. §102.

Claim 9 was rejected under 35 U.S.C. §103 as being unpatentable over *Liaw et al* in view of *Barg et al* (U.S. Patent No. 6,707,454).

Applicant respectfully traverses the Examiner's rejection of the claim under 35 U.S.C. §103. The claim has been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claim and allows the claim to issue.

As discussed above, since nothing in *Liaw et al* shows, teaches or suggests the primary features as claimed in claim 1, applicant respectfully submits that the combination of the primary reference with the secondary reference to *Barg et al* would not overcome the deficiencies of the primary reference. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claim 9 under 35 U.S.C. §103.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested. Should the Examiner find that the application is not now in condition for

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Respectfully submitted,

BUCHANAN INGERSOLL PC

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